

SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

**United States Patent Application**  
COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **PULSE SHAPING SIGNALS FOR ULTRAWIDEBAND COMMUNICATION.**

The specification of which was filed on March 31, 2004 as application serial no. 10/815,171.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

**No such claim for priority is being made at this time.**

I hereby appoint the following attorney(s) and/or patent agent(s) associated with Customer Number 45457 to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Customer Number 21186 at the address indicated below:

Schwegman, Lundberg, Woessner & Kluth, P.A.  
P.O. Box 2938, Minneapolis, MN 55402  
Telephone No. (612) 373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : Keith R Tinsley  
Citizenship: United States of America  
Post Office Address: 6280 SW Timberland Place  
Beaverton, OR 97007

Residence: Beaverton, OR

Signature: \_\_\_\_\_

Keith R Tinsley

Date: \_\_\_\_\_

8/3/2004

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Full Name of joint inventor number 2 : Jeffery R Foerster  
Citizenship: United States of America Residence: Portland, OR  
Post Office Address: 2533 NW 83rd Place  
Portland, OR 97229

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffery R Foerster

Full Name of joint inventor number 3 : Minnie Ho  
Citizenship: United States of America Residence: Los Altos, CA  
Post Office Address: 405 Becker Lane  
Los Altos, CA 94022

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Minnie Ho

Full Name of joint inventor number 4 : Evan R Green  
Citizenship: United States of America Residence: Beaverton, OR  
Post Office Address: 14720 NW Forestel Loop  
Beaverton, OR 97006

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Evan R Green

Full Name of joint inventor number 5 : Luiz M. Franca-Neto  
Citizenship: Brazil Residence: Portland, OR  
Post Office Address: 10921 NW Barrett Way  
Portland, OR 97229

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Luiz M. Franca-Neto

Full Name of joint inventor number 6 : Siva G. Narendra  
Citizenship: India Residence: Portland, OR  
Post Office Address: 7180 SW 84th Avenue  
Portland, OR 97223

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Siva G. Narendra

Attorney Docket No.: 884.B69US1  
 Serial No. 10/815,171  
 Filing Date: March 31, 2004

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

# United States Patent Application

## COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **PULSE SHAPING SIGNALS FOR ULTRAWIDEBAND COMMUNICATION**.

The specification of which was filed on March 31, 2004 as application serial no. 10/815,171.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

**No such claim for priority is being made at this time.**

I hereby appoint the following attorney(s) and/or patent agent(s) associated with **Customer Number 45457** to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to **Customer Number 21186** at the address indicated below:

**Schwegman, Lundberg, Woessner & Kluth, P.A.**  
**P.O. Box 2938, Minneapolis, MN 55402**  
**Telephone No. (612) 373-6900**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Keith R Tinsley**  
Citizenship: **United States of America**  
Post Office Address: **6280 SW Timberland Place**  
**Beaverton, OR 97007**

Residence: **Beaverton, OR**

Signature: \_\_\_\_\_  
Keith R Tinsley

Date: \_\_\_\_\_

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 3 of 4

Full Name of joint inventor number 2 : Jeffery R FoersterCitizenship: United States of AmericaResidence: Portland, ORPost Office Address: 2533 NW 83rd Place  
Portland, OR 97229

Signature: \_\_\_\_\_

Jeffery R Foerster

Date: \_\_\_\_\_

9-10-2004Full Name of joint inventor number 3 : Minnie HoCitizenship: United States of AmericaResidence: Los Altos, CAPost Office Address: 405 Becker Lane  
Los Altos, CA 94022

Signature: \_\_\_\_\_

Minnie Ho

Date: \_\_\_\_\_

Full Name of joint inventor number 4 : Evan R GreenCitizenship: United States of AmericaResidence: Beaverton, ORPost Office Address: 14720 NW Forestel Loop  
Beaverton, OR 97006

Signature: \_\_\_\_\_

Evan R Green

Date: \_\_\_\_\_

Full Name of joint inventor number 5 : Luiz M. Franca-NetoCitizenship: BrazilResidence: Portland, ORPost Office Address: 10921 NW Barrett Way  
Portland, OR 97229

Signature: \_\_\_\_\_

Luiz M. Franca-Neto

Date: \_\_\_\_\_

Full Name of joint inventor number 6 : Siva G. NarendraCitizenship: IndiaResidence: Portland, ORPost Office Address: 7180 SW 84th Avenue  
Portland, OR 97223

Signature: \_\_\_\_\_

Siva G. Narendra

Date: \_\_\_\_\_

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.





Attorney Docket No.834.B69US1

SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

**United States Patent Application**  
COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **PULSE SHAPING SIGNALS FOR ULTRAWIDEBAND COMMUNICATION.**

The specification of which was filed on March 31, 2004 as application serial no. 10/815,171.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

**No such claim for priority is being made at this time.**

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 2 of 4

I hereby appoint the following attorney(s) and/or patent agent(s) associated with Customer Number 45457 to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Customer Number 21186 at the address indicated below:

Schwegman, Lundberg, Woessner & Kluth, P.A.  
P.O. Box 2938, Minneapolis, MN 55402  
Telephone No. (612) 373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : Keith R Tinsley  
Citizenship: United States of America Residence: Beaverton, OR  
Post Office Address: 6280 SW Timberland Place  
Beaverton, OR 97007

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Keith R Tinsley

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Attorney Docket No.: 884.B69US1  
Serial No 10/815,171  
Filing Date: March 31, 2004

Page 3 of 4

Full Name of joint inventor number 2 : Jeffery R Foerster  
Citizenship: United States of America Residence: Portland, OR  
Post Office Address: 2533 NW 83rd Place  
Portland, OR 97229

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffery R Foerster

Full Name of joint inventor number 3 : Minnie Ho  
Citizenship: United States of America Residence: Los Altos, CA  
Post Office Address: 405 Becker Lane  
Los Altos, CA 94022

Signature: \_\_\_\_\_ Date: 08/07/04  
Minnie Ho

Full Name of joint inventor number 4 : Evan R Green  
Citizenship: United States of America Residence: Beaverton, OR  
Post Office Address: 14720 NW Forestel Loop  
Beaverton, OR 97006

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Evan R Green

Full Name of joint inventor number 5 : Luiz M. Franca-Neto  
Citizenship: Brazil Residence: Portland, OR  
Post Office Address: 10921 NW Barrett Way  
Portland, OR 97229

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Luiz M. Franca-Neto

Full Name of joint inventor number 6 : Siva G. Narendra  
Citizenship: India Residence: Portland, OR  
Post Office Address: 7180 SW 84th Avenue  
Portland, OR 97223

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Siva G. Narendra

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 4 of 4

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



Attorney Docket No.884.B69US1

SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

**United States Patent Application**  
COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **PULSE SHAPING SIGNALS FOR ULTRAWIDEBAND COMMUNICATION**.

The specification of which was filed on March 31, 2004 as application serial no. 10/815,171.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

**No such claim for priority is being made at this time.**

I hereby appoint the following attorney(s) and/or patent agent(s) associated with **Customer Number 45457** to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to **Customer Number 21186** at the address indicated below:

**Schwegman, Lundberg, Woessner & Kluth, P.A.**  
**P.O. Box 2938, Minneapolis, MN 55402**  
**Telephone No. (612) 373-6900**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Keith R Tinsley**  
Citizenship: **United States of America**  
Post Office Address: **6280 SW Timberland Place**  
**Beaverton, OR 97007**

Residence: **Beaverton, OR**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Keith R Tinsley

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 3 of 4

Full Name of joint inventor number 2 : Jeffery R Foerster

Citizenship: United States of America

Residence: Portland, OR

Post Office Address: 2533 NW 83rd Place  
Portland, OR 97229Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffery R FoersterFull Name of joint inventor number 3 : Minnie Ho

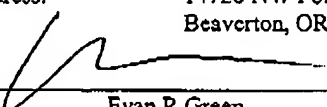
Citizenship: United States of America

Residence: Los Altos, CA

Post Office Address: 405 Becker Lane  
Los Altos, CA 94022Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Minnie HoFull Name of joint inventor number 4 : Evan R Green

Citizenship: United States of America

Residence: Beaverton, OR

Post Office Address: 14720 NW Forestel Loop  
Beaverton, OR 97006Signature:  \_\_\_\_\_ Date: 12/7/04  
Evan R GreenFull Name of joint inventor number 5 : Luiz M. Franca-Neto

Citizenship: Brazil

Residence: Portland, OR

Post Office Address: 10921 NW Barrett Way  
Portland, OR 97229Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Luiz M. Franca-NetoFull Name of joint inventor number 6 : Siva G. Narendra

Citizenship: India

Residence: Portland, OR

Post Office Address: 7180 SW 84th Avenue  
Portland, OR 97223Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Siva G. Narendra

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

---

Page 4 of 4

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



DEC 13 2004

Attorney Docket No.884.B69US1

SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

**United States Patent Application**  
COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **PULSE SHAPING SIGNALS FOR ULTRA WIDEBAND COMMUNICATION.**

The specification of which was filed on March 31, 2004 as application serial no. 10/815,171.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

**No such claim for priority is being made at this time.**

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

**No such claim for priority is being made at this time.**

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 2 of 4

I hereby appoint the following attorney(s) and/or patent agent(s) associated with Customer Number 45457 to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to Customer Number 21186 at the address indicated below:

**Schwegman, Lundberg, Woessner & Kluth, P.A.**  
P.O. Box 2938, Minneapolis, MN 55402  
Telephone No. (612) 373-6900

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Keith R Tinsley**  
Citizenship: **United States of America** Residence: **Beaverton, OR**  
Post Office Address: **6280 SW Timberland Place**  
**Beaverton, OR 97007**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Keith R Tinsley

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Attorney Docket No.: 884.B69US1  
Serial No.: 10/815,171  
Filing Date: March 31, 2004

Page 3 of 4

Full Name of joint inventor number 2 : Jeffery R Foerster  
Citizenship: United States of America Residence: Portland, OR  
Post Office Address: 2533 NW 83rd Place  
Portland, OR 97229

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffery R Foerster

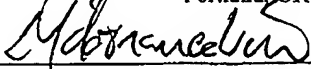
Full Name of joint inventor number 3 : Minnie Ho  
Citizenship: United States of America Residence: Los Altos, CA  
Post Office Address: 405 Becker Lane  
Los Altos, CA 94022

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Minnie Ho

Full Name of joint inventor number 4 : Evan R Green  
Citizenship: United States of America Residence: Beaverton, OR  
Post Office Address: 14720 NW Forestel Loop  
Beaverton, OR 97006

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Evan R Green

Full Name of joint inventor number 5 : Luiz M. Franca-Neto  
Citizenship: Brazil Residence: Portland, OR  
Post Office Address: 10921 NW Barrett Way  
Portland, OR 97229

Signature:  Date: 12/07/09  
Luiz M. Franca-Neto

Full Name of joint inventor number 6 : Siva G. Narendra  
Citizenship: India Residence: Portland, OR  
Post Office Address: 7180 SW 84th Avenue  
Portland, OR 97223

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Siva G. Narendra

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

ATTN: CHRIS HAMMOND

Attorney Docket No.884.B69US1

SCHWEGMAN ■ LUNDBERG ■ WOESSNER ■ KLUTH

**United States Patent Application**  
COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: PULSE SHAPING SIGNALS FOR ULTRA WIDEBAND COMMUNICATION.

The specification of which was filed on March 31, 2004 as application serial no. 10/815,171.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 C.F.R. § 1.56 (attached hereto). I also acknowledge my duty to disclose all information known to be material to patentability which became available between a filing date of a prior application and the national or PCT international filing date in the event this is a Continuation-In-Part application in accordance with 37 C.F.R. § 1.63(e).

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

No such claim for priority is being made at this time.

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

No such claim for priority is being made at this time.

I hereby claim the benefit under 35 U.S.C. § 120 or 365(c) of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. § 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

No such claim for priority is being made at this time.

Includes Signature of Siva G. Narasimha

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 2 of 4

I hereby appoint the following attorney(s) and/or patent agent(s) associated with **Customer Number 45457** to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Schwegman, Lundberg, Woessner & Kluth, P.A. to the contrary.

Please direct all correspondence in this case to **Customer Number 21186** at the address indicated below:

**Schwegman, Lundberg, Woessner & Kluth, P.A.**  
**P.O. Box 2938, Minneapolis, MN 55402**  
**Telephone No. (612) 373-6900**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of joint inventor number 1 : **Keith R Tinsley**  
Citizenship: **United States of America** Residence: **Beaverton, OR**  
Post Office Address: **6280 SW Timberland Place**  
**Beaverton, OR 97007**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Keith R Tinsley**

☒ Additional inventors are being named on separately numbered sheets, attached hereto.

Attorney Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 3 of 4

Full Name of joint inventor number 2 : Jeffery R Foerster  
Citizenship: United States of America Residence: Portland, OR  
Post Office Address: 2533 NW 83rd Place  
Portland, OR 97229

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffery R Foerster

Full Name of joint inventor number 3 : Minnie Ho  
Citizenship: United States of America Residence: Los Altos, CA  
Post Office Address: 405 Becker Lane  
Los Altos, CA 94022

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Minnie Ho

Full Name of joint inventor number 4 : Evan R Green  
Citizenship: United States of America Residence: Beaverton, OR  
Post Office Address: 14720 NW Forestel Loop  
Beaverton, OR 97006

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Evan R Green

Full Name of joint inventor number 5 : Luiz M. Franca-Neto  
Citizenship: Brazil Residence: Portland, OR  
Post Office Address: 10921 NW Barrett Way  
Portland, OR 97229

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Luiz M. Franca-Neto

Full Name of joint inventor number 6 : Siva G. Narendra  
Citizenship: India Residence: Portland, OR  
Post Office Address: 7180 SW 84th Avenue  
Portland, OR 97223

Signature: \_\_\_\_\_ Date: Aug 30, 2004  
Siva G. Narendra

Aftdmev Docket No.: 884.B69US1  
Serial No. 10/815,171  
Filing Date: March 31, 2004

Page 4 of 4

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.